IN THE CLAIMS:

The current claims follow. For claims not marked as amended in this response, any difference in the claims below and the previous state of the claims is unintentional and in the nature of a typographical error.

1. (Currently Amended) An apparatus, comprising:

a cross correlator operable to receive a first audio signal and a second audio signal, the cross correlator also operable to cross correlate the first and second audio signals to produce a cross-correlated signal;

at least one parameter identifier operable to receive the cross-correlated signal and identify a plurality of parameters associated with at least one of the first and second audio signals using the cross-correlated signal; and

a score generator operable to receive the plurality of parameters and generate an indicator identifying an extent to which the first and second audio signals match.

2. (Original) The apparatus of Claim 1, wherein the at least one parameter identifier comprises:

a delay identifier operable to identify a delay between the first and second audio signals;

a correlation identifier operable to identify an amount of correlation between the first and second audio signals; and

a pitch variation identifier operable to identify a variation in pitch between the first and second audio signals.

3. (Original) The apparatus of Claim 2, wherein:

the delay identifier is operable to identify the delay by identifying a maximum value in the cross-correlated signal;

the correlation identifier is operable to identify the amount of correlation by normalizing the cross-correlated signal; and

the pitch variation identifier is operable to identify the variation in pitch by identifying a coincidental harmonic frequency using the cross-correlated signal.

4. (Original) The apparatus of Claim 2, wherein the score generator is operable to generate the indicator by:

generating a first score using the delay between the first and second audio signals and the amount of correlation between the first and second audio signals;

generating a second score using the variation in pitch between the first and second audio signals; and

combining the first and second scores to produce a final score.

5. (Original) The apparatus of Claim 1, wherein the first audio signal is associated with an input signal and the second audio signal is associated with a reference signal; and

further comprising:

a plurality of decimators operable to receive and decimate the input signal and the reference signal; and

a plurality of filters operable to filter at least one of the input signal, the reference signal, a decimated input signal, and a decimated reference signal.

6. (Original) The apparatus of Claim 5, wherein the plurality of filters comprise:

a first anti-aliasing low pass filter operable to filter the input signal, a first of the decimators operable to decimate the filtered input signal;

a second anti-aliasing low pass filter operable to filter the reference signal, a second of the decimators operable to decimate the filtered reference signal;

a first band pass filter operable to filter the decimated input signal to produce the first audio signal; and

a second band pass filter operable to filter the decimated reference signal to produce the second audio signal.

7. (Original) The apparatus of Claim 1, further comprising a voice activity detector operable to detect a voice in the input signal;

wherein the score generator is operable to generate the indicator after the voice activity detector detects the voice in the input signal.

8. (Original) The apparatus of Claim 1, wherein:

each of the first and second audio signals comprises a plurality of frames; and

the cross correlator is operable to correlate one frame from the first audio signal and multiple frames from the second audio signal to produce the cross-correlated signal.

9. (Original) The apparatus of Claim 8, wherein the indicator identifies an extent to which the one frame from the first audio signal matches at least a portion of the multiple frames from the second audio signal.

10. (Original) A method, comprising:

receiving a first audio signal and a second audio signal;

cross-correlating the first and second audio signals to produce a cross-correlated signal;

identifying a plurality of parameters associated with at least one of the first and second audio signals using the cross-correlated signal; and

generating an indicator identifying an extent to which the first and second audio signals match using the plurality of parameters.

11. (Original) The method of Claim 10, wherein the plurality of parameters comprise:

a delay between the first and second audio signals;

an amount of correlation between the first and second audio signals; and

a variation in pitch between the first and second audio signals.

12. (Original) The method of Claim 11, wherein identifying the plurality of parameters comprises:

identifying the delay by identifying a maximum value in the cross-correlated signal;

identifying the amount of correlation by normalizing the cross-correlated signal; and

identifying the variation in pitch by identifying a coincidental harmonic frequency using the cross-correlated signal.

13. (Original) The method of Claim 11, wherein generating the indicator comprises:

generating a first score using the delay between the first and second audio signals and the amount of correlation between the first and second audio signals;

generating a second score using the variation in pitch between the first and second audio signals; and

combining the first and second scores to produce a final score.

14. (Original) The method of Claim 10, wherein the first audio signal is associated with an input signal and the second audio signal is associated with a reference signal; and

further comprising:

decimating the input signal and the reference signal; and

filtering at least one of the input signal, the reference signal, a decimated input signal, and a decimated reference signal.

15. (Original) The method of Claim 14, wherein filtering at least one of the signals comprises:

anti-alias low pass filtering the input signal;

anti-alias low pass filtering the reference signal;

band pass filtering the decimated input signal to produce the first audio signal; and

band pass filtering the decimated reference signal to produce the second audio signal.

16. (Original) The method of Claim 10, further comprising detecting a voice in the input signal;

wherein generating the indicator comprises generating the indicator after detecting the voice in the input signal.

17. (Original) The method of Claim 10, wherein:

each of the first and second audio signals comprises a plurality of frames; and

cross-correlating the first and second audio signals comprises cross-correlating one frame from the first audio signal and multiple frames from the second audio signal to produce the cross-correlated signal.

18. (Original) A computer program operable to be executed by a processor, the computer program comprising computer readable program code for:

receiving a first audio signal and a second audio signal;

cross-correlating the first and second audio signals to produce a cross-correlated signal;

identifying a plurality of parameters associated with at least one of the first and second audio signals using the cross-correlated signal; and

generating an indicator identifying an extent to which the first and second audio signals match using the plurality of parameters.

19. (Original) The computer program of Claim 18, wherein the plurality of parameters comprise:

a delay between the first and second audio signals;

an amount of correlation between the first and second audio signals; and

a variation in pitch between the first and second audio signals.

20. (Original) The computer program of Claim 19, wherein the computer readable program code for identifying the plurality of parameters comprises computer readable program code for:

identifying the delay by identifying a maximum value in the cross-correlated signal;

identifying the amount of correlation by normalizing the cross-correlated signal; and

identifying the variation in pitch by identifying a coincidental harmonic frequency using the cross-correlated signal.

21. (Original) The computer program of Claim 19, wherein the computer readable program code for generating the indicator comprises computer readable program code for:

generating a first score using the delay between the first and second audio signals and the amount of correlation between the first and second audio signals;

generating a second score using the variation in pitch between the first and second audio signals; and

combining the first and second scores to produce a final score.

22. (Original) The computer program of Claim 18, wherein the first audio signal is associated with an input signal and the second audio signal is associated with a reference signal; and

further comprising computer readable program code for:

decimating the input signal and the reference signal; and

filtering at least one of the input signal, the reference signal, a decimated input signal, and a decimated reference signal.

23. (Original) The computer program of Claim 22, wherein the computer readable program code for filtering at least one of the signals comprises:

computer readable program code for anti-alias low pass filtering the input signal;

computer readable program code for anti-alias low pass filtering the reference signal;

computer readable program code for band pass filtering the decimated input signal to produce the first audio signal; and

computer readable program code for band pass filtering the decimated reference signal to produce the second audio signal.

24. (Original) The computer program of Claim 18, further comprising computer readable program code for detecting a voice in the input signal;

wherein the computer readable program code for generating the indicator comprises computer readable program code for generating the indicator after detecting the voice in the input signal.

25. (Original) The computer program of Claim 18, wherein:

each of the first and second audio signals comprises a plurality of frames; and

the computer readable program code for cross-correlating the first and second audio signals comprises computer readable program code for cross-correlating one frame from the first audio signal and multiple frames from the second audio signal to produce the cross-correlated signal.